

~~KOZLOVSKI, M.I.~~

Conference of representatives of plant and industrial laboratories
of Kazakhstan and Central Asia. Zav.lab. 22 no.3:378-379 '56.
(MLRA 10:5)

- 1.Predsedatel' Orgkomiteta po sozyvu konferentsii.
- 2.Chlen-korrespondent Akademii nauk KazSSR.
(Alma-Ata--Chemistry, Technical--Congresses)

Kozlovskiy, M.T.

USSR/ Engineering - Conferences

Card 1/1 Pub. 124 - 22/28

Authors : Kozlovskiy, M. T., Memb. Corresp. of the Acad. of So., Kaz. SSR

Title : Cooperation between scientific and industrial laboratories

Periodical : Vest. AN SSSR 26/1, 97-99, Jan 1956

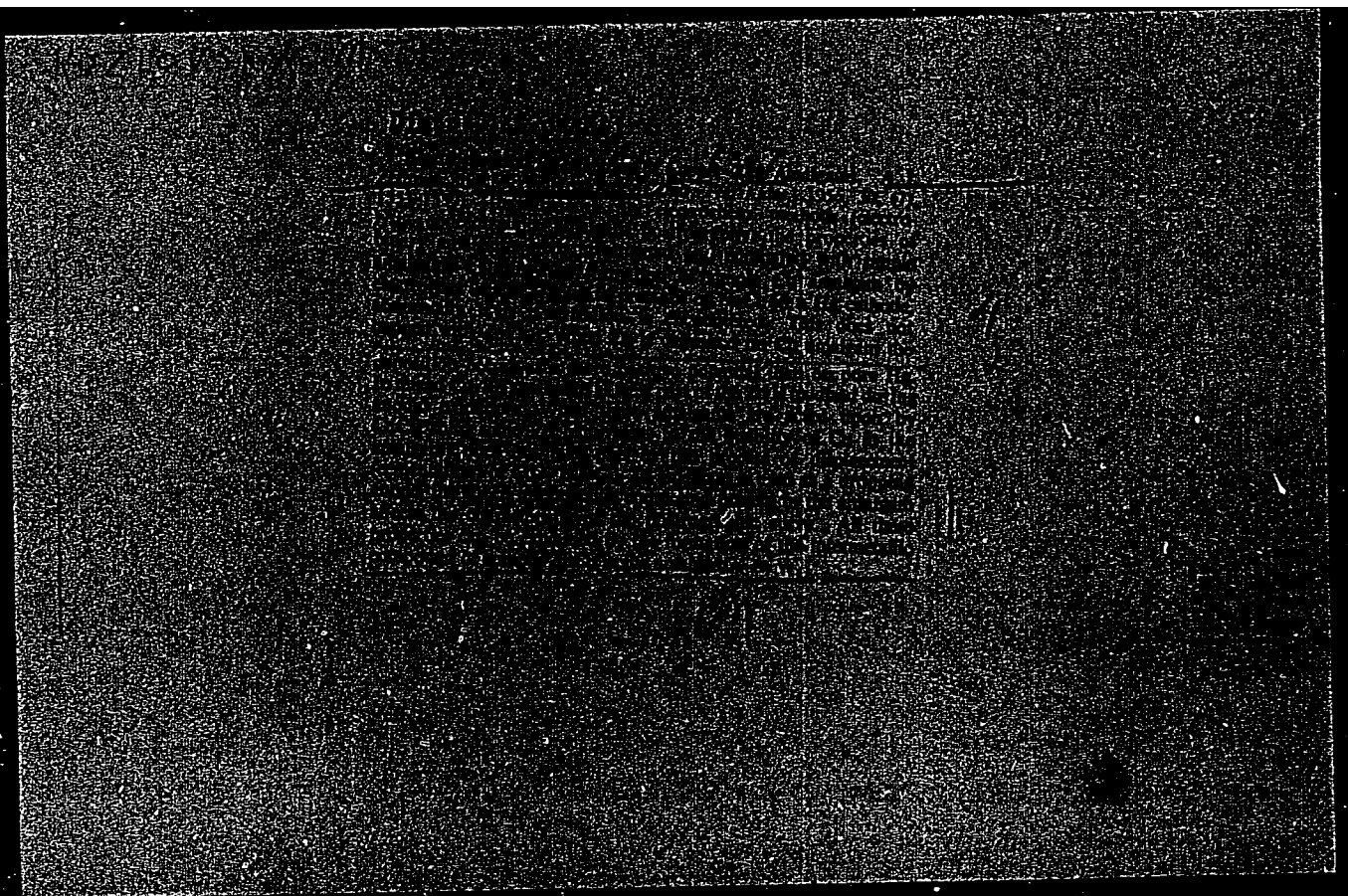
Abstract : Minutes are presented from a scientific-industrial conference held at the S. M. Kirov University of Alma-Ata where problems of closer cooperation between science and industry were discussed.

Institution :

Submitted :

"APPROVED FOR RELEASE: Monday, July 31, 2000

CIA-RDP86-00513R000825920



APPROVED FOR RELEASE: Monday, July 31, 2000

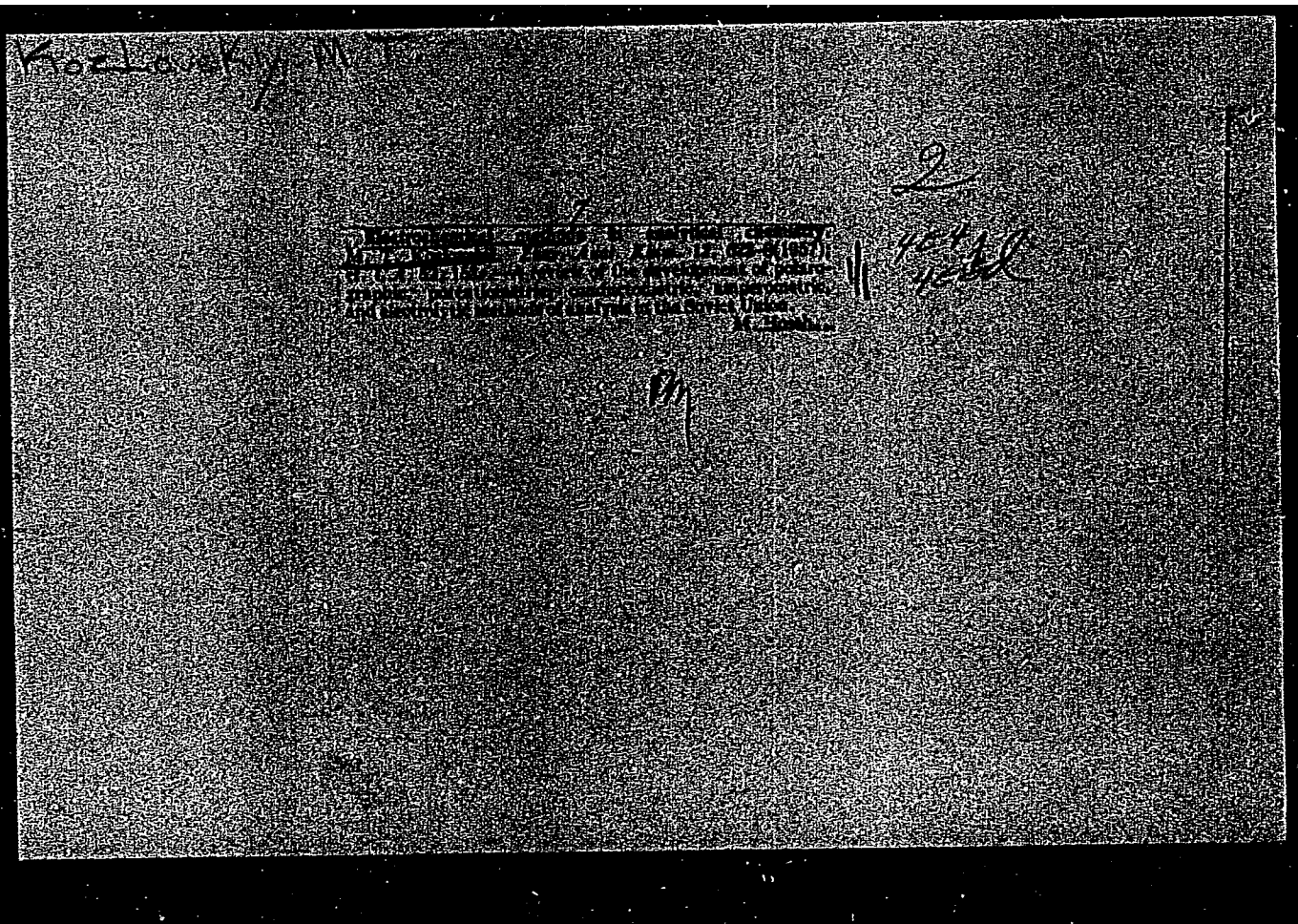
CIA-RDP86-00513R000825920C

KOZLOVSKIY, M. T.

RAZINA, M.F.; KOZLOVSKIY, M.T.; STENDER, V.V.

Lead anode destruction in the electrolysis of sulfate solutions. Dokl.
AN SSSR 111 no.2:404-406 N '56. (MIRA 10:1)

1. Dnepropetrovskiy khimiko-tekhnologicheskii institut imeni F.E.
Dzerzhinskogo. Predstavleno akademikom S.I. Vol'kovichem.
(Electrodes) (Lead—Electrometallurgy)



Kozlovskiy, M. T.

32-8-2/61

AUTHORS: Songina O. A., Kemeleva N. G., Kozlovskiy M. T.
TITLE: The Use of Electrolytically Produced Permanganate Ions for the Purpose of Coulombometrical Titration.
(Primeneniye elektroliticheskoi generirovannogo permanganat-ionov dlya tseley kulonometricheskogo titrovaniya - Russian)
PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol 23, Nr 8, pp 896-900 (USSR)
ABSTRACT: The above-mentioned titration is used for the determination of a minimum foreign content in pure metals and permits to determine the content of an admixture of the order 10-12 g-ekv sufficiently rapid and accurate, in which connection an automatic control of the process is also made possible. The scientists Tutuntsich and Mladenovich proposed to use the permanganate ions that were electrolytically produced from the solutions of manganese sulfate in the coulombometrical titration. These scientists also found out that the production may best be carried out when the acid content of the solution is 4-10.n. In the work this is practiced within the limits 7-10.n of sulfuric acid, and for comparison processes were also carried out at 1-n H_2SO_4 . In the section "The volt-ampere curve Fe^{2+} and Fe^{3+} " it is shown that on an internal reagent production in the presence of the same electrolyzer different ions can be determined.

Card 1/2

The Use of Electrolytically Produced Permanganate Ions for the Purpose of
Coulombometrical Titration. 32-8-2/61

It is proved here that beside Mn^{2+} and MnO_4^- ions in the solution Fe^{2+} and Fe^{3+} ions may also occur. In the next section entitled "Coulombometric titration of iron" the mentioned process is described in connection with the application of a special apparatus (a scheme is given). By an illustration the application of a special electrolyzer which is used in this connection is described. This electrolyzer permits up to 15 determinations per hour. The conclusion is drawn that the titration of 6 to 56 μ -iron in the described manner yields accurate results. In the case of smaller quantities the possibility of errors increases. With regard to the use of the electrolytically produced permanganate ion it is said that it is rendered difficult in iron determinations due to the reversibility of the system Fe^{2+}/Fe^{3+} , but that it is simple when the latter is absent.
(There are 6 illustrations, 1 table, 8 references).

ASSOCIATION: Kazakh State University.
(Kazakhskiy gosudarstvennyy universitet).

AVAILABLE: Library of Congress.
Card 2/2

AUTHOR: Kozlovskiy, E. T., Professor, Doctor of Chemical Sciences 32-10-7/32

TITLE: Comments

PERIODICAL: Zavodskaya Laboratoriya, 1957, Vol 23, Nr 10, pp. 1174-1175 (USSR)

ABSTRACT: In the report published by the author on the occasion of the 40th anniversary of the October revolution it is stated that the main task of the present analytical chemistry consists in. 1) Determination and investigation of the properties of all periodic elements which are contained in an only small percentage in a substance. 2) Shortening of the period of analysis. 3) Automation of the processes of analysis with telemechanical registration of the results. The microchemical analysis-methods, the drop-, and microdosis-method, the methods of application of organic reagents in inorganic analysis, chromatographic analysis, the application of ions, the method of photocolorimetry, spectrophotometry, and flame-photometry, as well as radiochemical methods of analysis experienced an intense development through the solution of these problems. Among recent electrochemical methods polarography was preferably developed, especially in the field of polarographic maxima, of the surface-activation-substances, of amalgam polarography, as well as the use of

Card 1/3

Comments

32-10-7/32

hard electrodes. The methods of oscillographic polarography remained insufficiently developed in the USSR. Successful work was performed, however, in the fields of ammeric titration which was preferred to conductometric titration, high-frequency titration to which, however, according to the opinion of the author, too little attention is paid. In the USSR, the potentiometric methods, especially with respect to the determination of the pH-value, the cobalt-content, classical electroanalyses which make it possible to carry out a particularly accurate separation of the metals, as well as a precise precipitation of the metals with mercury cathode and amalgam anode oxidation, further the methods of interval electrolysis which is applied with the determination of traces of metal, and finally the method of cementation which proved to be especially practical and simple in removing disturbing components or traces. The use of amalgams in the latter case is very promising. Though the method of coulombometric (kulenmetrikh) analysis originated in the USSR it is less developed in this country than abroad. The same can be stated with regard to coulombometric titration which for the first time was proposed by Hungarian chemists. The field of electrochronometry is also little developed in the USSR. These defects are attributed to the backwardness in the corresponding branches of industry in the USSR, since most of the outfit and appartuses must be constructed by the inven=

Card 2/3

Comments

32-10-7/32

tor himself, because the respective industrial branches have still too little adaptability in the manufacture of complicated appliances.

ASSOCIATION: Kazakh State University (Kazakhskiy gosudarstvennyy universitet).

AVAILABLE: Library of Congress.

1. Chemistry-USSR-Progress

Card 3/3

Kozlovskiy, M.T.

5(2) p. 1, 2, 3

PHASE I BOOK EXPLOTTATION

SOV/1699

Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk
Issledovaniya po elektrokhimii vodnykh rastvorov i rasplavov i amal'gamnoy
metallurgii (Research on the Electrochemistry of Water Solutions, Fusions
and Amalgam Metallurgy) Alma-Ata, Izd-vo AN Kaz. SSR, 1958. 122 p.
(Series: Its: Trudy, t. 3) 1,300 copies printed.

Ed.: V.V. Aleksandriyskiy; Tech. ed.: Z.P. Rorokina; Editorial Board of Series:
I.I. Zaboltn, V.M. Ilyushchenko, G.Z. Kir'yakov (Deputy Resp. Ed.),
M.T. Kozlovskiy, (Resp. Ed.) and L.N. Sheludyakov.

PURPOSE: This book is intended for scientists and engineers in the electrochemical
and nonferrous metal industries.

COVERAGE: This collection contains 14 reports by the Laboratories for Analytical
Chemistry and Electrochemistry attached to the Institute of Chemical Sciences,
Academy of Sciences, Kazakhstan Republic. The amalgam method of obtaining
thallium from lead powder, the electrolysis of sulfate solutions of zinc and
the impoverishment of waste slag during nickel production are described. The
majority of articles have a practical nature and deal with problems of

Card 1/4

Research on the Electrochemistry of Water Solutions (Cont.) SOV/1699

developing and perfecting new electrochemical methods for the production of
nonferrous metals.

TABLE OF CONTENTS:

Foreword

3

Kozlovskiy, M.T., M.V. Nosek, S.P. Bukhman, P.I. Zaboltn, and
V.M. Ilyushchenko. Water Lixiviation of Thallium From Sinter
Bars of the Chimkent Lead Plant

5

Kozlovskiy, M.T., S.P. Bukhman, M.V. Nosek, V.M. Ilyushchenko,
and P.I. Zaboltn. Displacement of Thallium From Industrial
Solutions by Zinc Amalgam

15

Kozlovskiy, M.T., S.P. Bukhman, M.V. Nosek, V.M. Ilyushchenko,
P.I. Zaboltn, and A.I. Zebreva. Electrolytic Decomposition of
Amalgam During the Production of Thallium From Powders of the
Chimkent Lead Plant

20

Card 2/4

Research on the Electrochemistry of Water Solutions (Cont.)	SOV/1699	
Nosek, M.V., V.M. Ilyushchenko, and M.T. Kozlovskiy. Investigation of Potentials of Some Amalgam Metals During Anode Oxidation in a Sulfate-Ammonium Electrolyte		29
Bukhman, S.P., and M.V. Nosek. Polarographic Method of Determining Indium		39
Zabotin, P.I., M.T. Kozlovskiy, and G.Z. Kir'yakov. Electrolysis of Sulfate Solutions of Zinc With a Mercury Cathode and a Low Content of Zinc in the Solution		45
Shevtsova, N.K., and M.T. Kozlovskiy. The Use of Aluminum for Displacement of Metals From Water Solutions of Their Salts		54
Kir'yakov, G.Z., and F.K. Bayniyetova. The Influence of Some Metal Ion Admixtures on the Cathode Process During the Electrolysis of Zinc Sulfate Solutions Under Conditions of High Current Density		64

Card 3/4

Research on the Electrochemistry of Water Solutions (Cont.)	SOV/1699	
Kir'yakov, G.Z., F.K. Baynietova, and R.S. Vakhidov. Role of Manganese in the Zinc Electrodeposition Process		72
Vakhidov, R.S., and G.Z. Kir'yakov. Electrodeposition of Cadmium Under Conditions of High Current Densities		82
Dunayev, Yu. D., and G.Z. Kir'yakov. Lead-based Cermet Anodes		87
Bulakh, A.A., L.N. Sheludyakov, Yu. D. Dunayev, and G.Z. Kir'yakov. Impoverishment of Fused Waste Slag From the Production of Nickel by the Displacement Method. Part I.		102
Sheludyakov, L.N., and G.Z. Kir'yakov. Impoverishment of Fused Waste Slag From the Production of Nickel by the Displacement Method. Part II.		111
Sheludyakov, L.N., and G.Z. Kir'yakov. Impoverishment of Fused Waste Slag From the Production of Nickel by the Displacement Method. Part III.		118

AVAILABLE: Library of Congress

TM/mas

Card 4/4

ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.

Separation of cadmium and indium by anode oxidation of mixed
amalgams. Izv. AN Kazakh. SSR. Ser.khim. no.1:23-28 '58.

(Cadmium--Analysis) (Indium--Analysis) (MIRA 12:2)
(Oxidation)

AUTHORS: Babkin, G.N., Kozlovskiy, M.T. 153-58-1-20/29

TITLE: Electrochemical Investigation of Cobalt-Zinc Amalgams
(Elektrokhimicheskoye issledovaniye kobal'to-tsinkovykh amal'gam)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya
tekhnologiya, 1958, Nr 1, pp. 129-136 (USSR)

ABSTRACT: In order to solve the problem of the character of the interaction
between cobalt and zinc in amalgam the authors carried out a
number of investigations. First, reference is made to the works by
Speranskiy, Tsyb and Kozlovskiy (Ref 2), Tsyb (Refs 3,4) and
Speranskiy (Ref 5). In the course of the present paper the authors
describe the (polarographical) investigations of cobalt-zinc amal-
gams carried out by them, in the course of which they found that
the anode wave height of zinc is reduced in the case of an increased
concentration of cobalt in the amalgam. Proportionally, the reduc-
tion of the zinc wave does not correspond to the cobalt content in
the amalgam. The authors measured the reversible potentials, on
which occasion the influence exercised by the concentration of co-
balt upon the potential of the zinc amalgam was again determined.
The authors assume the reduction of the zinc wave and the modifica-

Card 1/2

Electrochemical Investigation of Cobalt-Zinc Amalgam

153-58-1-20/29

tion of the amount of the potential depends upon the intermetallic cobalt-zinc compound which is subjected to partial dissociation. On the basis of the results obtained by measuring the wave-height of zinc for various relations between zinc and cobalt in the amalgam it was possible to determine the dissociation constant and the formula of the compound formed. The dissociation constant was also determined on the strength of potentiometric measurements and was of the same order as that mentioned. There are 5 figures, 3 tables, and 12 references, 12 of which are Soviet.

ASSOCIATION: Kazakhskiy universitet im. S.M.Kirova i institut khimicheskikh nauk AN Kaz.SSSR. Kafedra analiticheskoy khimii (Kazakh University imeni S.M.Kirov and Institute of Chemical Sciences AS Kazakhstan SSR, Chair of Analytical Chemistry)

SUBMITTED: October 5, 1957

Card 2/2

KOZLOVSKIY, M.T., prof.

Amalgam methods for obtaining metals. Khim. nauka i prom. 3 no.4:

439-443 '58.

(MIRA 11:10)

(Amalgamation) (Electrometallurgy)

AUTHORS: Bukhman, S.P., Nosek, M.V., Kozlovskiy, K.T. 32-24-4-4/67

TITLE: An Accelerated Method for the Polarographic Determination of Indium (Uskorennyy metod polyarograficheskogo opredeleniya indiya)

PERIODICAL: Zavodskaya Laboratoriya, 1958, Vol. 24, Nr 4, pp. 392-395 (USSR)

ABSTRACT: A number of tests confirmed the fact that indium from 10% sulfuric acid solutions with zinc amalgam does not cement. This knowledge is utilized for the elimination of accompanying elements. In the case of the treatment of indium solutions with zinc amalgam, copper, thallium, and cadmium are reduced to the metal and penetrate into the amalgam, whereas arsenic III and partly antimony, tellurium and selenium remain on the amalgam surface. The latter may lead to part of the indium going over into the amalgam. In order to remove arsenic V, which cannot be quantitatively reduced during treatment with zinc amalgam without causing a loss of indium, the solution is treated with iron reduced in hydrogen and in a 4n sulfuric acid medium. During polarization itself, it is true that also the presence of antimony, which must first be removed, disturbs. From the process of analysis given it may be seen that a

Card 1/2

An Accelerated Method for the Polarographic
Determination of Indium

32-24-4-4/67

2% zinc amalgam solution is used and that at least 75 g/l NaCl is added. However, polarograms are made within a potential range of from -0.45 -0.8 V. The method was employed for determining indium in the dust of a lead mine and gives results which agree well with those obtained by the usual method of determination of the Glutsvetmet. If two standard samples are used determination is said to take from 40 to 50 minutes. Results are given in a table. There are 1 figure, 2 tables, and 7 references, 6 of which are Soviet.

ASSOCIATION: Institut khimicheskikh nauk Akademii nauk Kazakhskoy SSR
(Institute for Chemical Sciences AS Kazakh SSR)

1. Indium compounds--Analysis
2. Indium--Determination
3. Metals--Separation
4. Polarographic analysis

Card 2/2

KOZLOVSKIY, M.T.

136-1-7/20

AUTHORS: Kozlovskiy, M.T., Zabotin, P.I., Ilyushchenko, V.M.,
Bukhman, S.P., Nosek, M.V., Sergiyenko, V.Ya. and Malkin,
Ya.Z.

TITLE: Use of an Amalgam Method for Extracting Thallium from
Chimkent . Lead Works Dust (Primeneniye amal'gamnogo
metoda k izvlecheniyu talliya iz pyley chimkentskogo
svintsovogo zavoda)

30,
PERIODICAL: Tsvetnyye Metally, 1958, No.1, pp. 30 - 41 (USSR).

ABSTRACT: The work described was based on theoretical and applied
work on amalgam methods of separating and producing metals at
the Chemical-sciences Institute of the Ac.Sc. KazakSSR
(Institut khimicheskikh nauk AN KazSSR) and the Kazakhsk State
University imeni S.M. Kirov (Kazakhskiy gosudarstvennyy
universitet im. S.M. Kirova) under the direction of M.T. Kos-
lovskiy (Refs. 1-8). The following participated in the work:
A. Zebreva, Candidate of Chemical Sciences, V. Gladyshev of the
University and M. Levanov, V. Prachev, Ye. Rubanova,
M. Shalaginova, G. Nosov and Yu. Stolyarov of the Chimkentsk
Lead Works. K. Simakov and L. Ushkov of the Works helped to
organise the semi full-scale trials and I. Yudevich and
N. Karpenko analysed spectroscopically for thallium and
Card1/3 w. Popova did chemical and polarographic analyses with O. Orsa

136-1-7/20

Use of an Amalgam Method for Extracting Thallium from Chimkent
Lead Works Dust

of the Chemical-sciences Institute of the An KazSSR. Sintering-dust analyses for different periods are tabulated (Table 1) and laboratory-scale experiments with the dust are described. Here, roasting of 20-25 kg batches was carried out at 400 - 500 °C, showing (Fig.1) that an appreciable part of the sulphide, sulphur and thallium is eliminated within the first hour at 400 °C. Four-fold leaching of the dust (two 250-g samples) with water at 80 - 90 °C showed (Table 3) that 80-90% of the thallium was extracted in the water, the extraction increasing with temperature. Cementation of thallium with zinc amalgam was carried out on the acidulated extract which was continuously circulated (Fig.3): the results (Table 4) showed that 98-99% extraction of thallium from the solution could be obtained. It was shown that the amalgam (originally 0.36 - 0.40 g/litre Zn, 0.127 g/litre Cd and 108 mg/litre Tl) could be decomposed by anodic oxidation with special electrolytes at current densities of 100 - 50 A/m², the density being gradually reduced as the appropriate metal was removed from the amalgam. The flow-sheet based on the laboratory results (Fig.4) was put into practice in a larger scale plant (Fig.5) at the Chimkens Works, where it

Card2/3

136-1-7/20

Use of an Amalgam Method for Extracting Thallium from Chimkent
Lead Works Dust

treated several tons of dust from April to October, 1956 and was used for balance experiments in October of that year. The article gives details of the different stages and balances for the different metals. These show that with the proposed method pure metallic thallium can be obtained with a yield of 65%, about 30% being in returns and 5% being lost. An editorial note invites discussion on the amalgam method. There are 5 figures, 13 tables and 10 Russian references.

ASSOCIATION: Institute of Chemical Sciences of the Ac. of Sc. KazSSR
(Institut khimicheskikh nauk AN KazSSR) and
Chimkent Lead Works (Chimkentskiy svintsovy zavod)

AVAILABLE: Library of Congress
Card 3/3

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy... [abornik] (Transactions of the Fourth Conference on Electromechanics; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. 8rta slip inserted. 2500 copies printed.
Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A. N. Prumkin (Resp. Ed.) Academician, O. A. Yasin, Professor, S. I. Zhdanov (Resp. Secretary), B. M. Katsenoy, Professor, S. I. Zhdanov (Resp. Secretary), B. M. Katsenoy, Professor, Ya. M. Kolotyrkin, Doctor of Chemical Sciences, V. V. Losev, P.D. Lukavtsev, Professor, Z. A. Solov'yeva, V. V. Sender, Professor, and G. M. Floranovich, Ed. of Publishing House: M. D. Yegorov; Tech. Ed.: T. A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

OVERVIEW: The book contains 127 of the 139 reports presented at the 1977 International Symposium on Electrochemistry sponsored by the Ministry of Chemical Sciences and the Institute of Physical Chemistry, Academy of Sciences, USSR. The collection is in three parts and covers branches of electrochemical science, electrochemical technology, and electrochemical engineering. The collection includes 127 papers, 126 of which are in English. The papers are arranged in 12 sections. The first section contains 12 papers on the electrochemistry of metals. The second section contains 12 papers on the electrochemistry of nonmetals. The third section contains 12 papers on the electrochemistry of organic compounds. The fourth section contains 12 papers on the electrochemistry of inorganic compounds. The fifth section contains 12 papers on the electrochemistry of polymers. The sixth section contains 12 papers on the electrochemistry of biological systems. The seventh section contains 12 papers on the electrochemistry of environmental systems. The eighth section contains 12 papers on the electrochemistry of energy conversion. The ninth section contains 12 papers on the electrochemistry of materials. The tenth section contains 12 papers on the electrochemistry of analytical chemistry. The eleventh section contains 12 papers on the electrochemistry of industrial processes. The twelfth section contains 12 papers on the electrochemistry of other topics. The majority of reports included here are in the English language. The majority of reports included here are in the English language. The majority of reports included here are in the English language.

Golubtsov, Ye. P. (Institut geokhimi i analiticheskoy khimii AN SSSR imeni V.I. Vernadskogo - Institute of Geochemistry and Analytical Chemistry imeni V.I. Vernadskiy, Academy of Sciences, USSR). Diffusion of Electrolytes and the Polarographic Method

~~Rozenfeld, I. L., and~~ **K. A. Zhigalova** (Institute of Physical Chemistry, Academy of Sciences, USSR). Diffusion of Oxygen Through Thin Films of Electrolytes

Discussion (O.S. Ksenzhek, Yu. A. Chizmadzhev, Yu. A. Ydovin, O. B. Khachatryan and contributing authors) 659

PART VIII. ELECTROCHEMICAL PROCESSES IN NONFERROUS METALLURGY 695

Stander, V. V. (Dnepropetrovsk Institute of Chemical Technology
Imeni V. E. Dzerzhinskii; Institute of Chemistry, Academy
of Sciences, KazSSR). Electrolysis as a Means of Combining

Card 27/34

Several Metallurgical and Chemical Production Processes
(Some New Processes of Hydroelectric Metallurgy)

Korlovskiy, M.T. (Kazakh State University, Academy of Sciences,
~~Kazakh State University~~ Some Problems of Amalgam Metallurgy - Cementation
of Metals With Amalgams

Dolinar'skiy, Yu. K., B. P. Martov, I. D. Panchenko, Ye. R. Ol'shan, and A. A. Kolodiy, Institute of General and Inorganic Chemistry, Academy of Sciences, USSR. Electrolytic Purification of Lead From Pused Sludge. *110*

Chizhikov, D.M., and V.N. Kovylina (Institute of Metallurgy,
Academy of Sciences, USSR). Investigation of the Potentials
and Anodic Polarization of Metallic Sulfides and Their
Alloys 715

Levin, P. I., and I. A. Bauman (Deceased) (Vsesoyuznyy nauchno-issledovatel'skiy institut tsvetnykh metallov - All-Union Scientific Research Institute of Nonferrous Metals). Special

Card 28/34

features of the anode process during the purification of a copper-nickel anode in a sulfate-chloride electrolyte. Zartakly, S.A., I.G. Zharnitskiy (deceased), and I.A. Bogdanova. *Russian Chem. Rev.*, 1964, 33, No. 1, p. 103. (Russian)

SAGADIYEVA, K.Zh.; KOZLOVSKIY, M.T.

Amalgam polarography and the solubility of metals in mercury. Izv.
AN Kazakh.SSR, Ser.khim. no.1:22-25 '59. (MIRA 13:6)
(Polarography) (Amalgams)

ZEBREVA, A.I.; KOZLOVSKIY, M.T.

Electrolysis of antimony with the use of mercury electrode. Izv.
AN Kazakh.SSR.Ser.khim. no.1:33-38 '59. (MIRA 13:6)
(Antimony)

5(2)

AUTHORS: Speranskaya, Ye. F., Kozlovskiy, M. T. SOV/153-2-1-1/25

TITLE: Reduction of Selenium by Cadmium Amalgam (Vosstanovleniye selena amal'gamoy kadmiya)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy. Khimiya i khimicheskaya tekhnologiya, 1959, Vol 2, Nr 1, pp 3-9 (USSR)

ABSTRACT: In the latest publications dealing with the amalgam methods of metal separation the behavior of selenium was not taken into account. The investigation of the afore-mentioned problem is interesting from two points of view: 1) with respect to the quantitative separation of selenium from other elements; 2) with respect to its effect on the "formation of slime" (transformation of amalgam into a fine suspension which forms no drops). This article deals with the reduction of Se (IV) under various conditions. Figure 1 shows the variation in the current intensity with time during the electrolysis of an H_2SeO_3 solution on a dropping mercury electrode. The reduction was performed in a container illustrated in figure 2. Table 1 shows the cadmium-amalgam potentials in various media with regard to the usual H-electrode. These were: a) HCl; the results

Card 1/3

Reduction of Selenium by Cadmium Amalgam

SOV/153-2-1-1/25

dependent on various HCl concentrations are listed in table 2; b) H_2SO_4 ; the results are given in table 3; c) HNO_3 (see Table 4). Figure 4 illustrates the variation in the amalgam content during the cementation. The authors proved that within the range of concentration of the acids (0.001 - 1 mol) selenium may be removed from the solution due to its production of mercury selenide. Selenium is not reduced from ammoniacal solutions. 3) The authors assumed that it is not the selenide ion but elementary selenium that constitutes the final stage in the reduction of selenium from acid solutions. Mercury selenide is produced by immediate interaction of elementary selenium with metallic mercury. 4) Further, they suppose that the occurrence of three potentiometric waves of selenium reduction is not connected with the formation of various reduction products of Se (IV) but with the inhibitory effect of the mercury-selenide film on the surface of the mercury drop. There are 4 figures, 4 tables, and 20 references, 13 of which are Soviet.

Card 2/3

Reduction of Selenium by Cadmium Amalgam

SOV/153-2-1-1/25

ASSOCIATION: Kazakhskiy gosudarstvennyy universitet im. S. M. Kirova,
Kafedra analiticheskoy khimii (Kazakh State University imeni
S. M. Kirov, Chair of Analytical Chemistry)

SUBMITTED: November 27, 1957

Card 3/3

5(2)

05717

AUTHORS:

Zebreva, A. I., Kozlovskiy, M. T.

SOV/32-25-10-6/63

TITLE:

Application of Mixed Backgrounds in the Polarographic Determination of Thallium

PERIODICAL:

Zavodskaya laboratoriya, 1959, Vol 25, Nr 10, pp 1172-1174 (USSR)

ABSTRACT:

A simple and rapid method of determining thallium in solutions ~~containing~~ besides thallium, small quantities of lead, cadmium, zinc and arsenic, as well as traces of selenium, antimony, bismuth, iron and copper, was developed. The method is based on polarography in an alkaline-ammoniacal solution. Data on an ammonia ammonium-salt background are found in Vlcek's (Ref 1) tables, but there are no publication data on an alkaline-ammoniacal background. Thallium determinations were carried out in the presence of lead and cadmium in a ratio corresponding to industrial conditions (Table 1). The polarography was carried out on a visual polarograph with a galvanometer of a sensitivity of $1.7 \cdot 10^{-9}$ a. Zinc does not disturb the determination whereas the disturbance by copper (appearance of two peaks) can be eliminated by subtracting the

Card 1/2

05717

SOV/32-25-10-6/63

Application of Mixed Backgrounds in the Polarographic Determination of Thallium

first copper peak from the joint thallium-copper peak (Table 2). The background suggested is suitable for polarographic thallium determinations in solutions obtained by lixiviating the thallium from the dust of lead works. The method may also be used for analyzing samples with a higher cadmium- and lead content; but here the concentration of ammonia, or of lye, respectively, must accordingly be changed (Table 3) to prevent the formation of precipitates. There are 3 tables and 1 reference.

ASSOCIATION: Kazakhskiy gosudarstvennyy universitet (Kazakh State University)

Card 2/2

NOSEK, M.V.; BUKHMAN, S.P.; KOZLOVSKIY, M.T.

Reduction of arsenic by zinc amalgam. Report No. 2. Izv. AN Kazakh.
SSR. Ser. khim. no.1:77-85 '60. (MIRA 13:11)
(Arsenic) (Zinc-mercury alloys)

BUKHMEN, S.P.; NOSEK, M.V.; KOZLOVSKIY, M.T.

Reduction of arsenic by zinc amalgam. Report No.1. Izv. AN Kazakh.
SSR.Ser. khim. no.1:69-76 '60. (MIRA 13:11)
(Arsenic) (Zinc-mercury alloys)

GLADYSHEV, V.P.; KOZLOVSKIY, M.T.

Use of oscillographic polarography in the study of the anodic
oxidation of complex amalgams. Izv. AN Kazakh. SSR Ser. khim.
no. 2:61-66 '60. (MIRA 14:5)
(Amalgams) (Polarography)

GLADYSHEV, V.P.; ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.

Causes of sludge formation in the preparation of thallium by the
amalgam method. Izv. AN Kazakh. SSR Ser. khim. no. 2:67-74 '60.
(MIRA 14:5)

(Thallium)

ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.; PORUBAYEV, V.P.

Use of trilon B in thallium refining. Trudy Inst.khim.nauk AN Kazakh.
SSR 6:61-66 '60. (MIRA 14:4)

(Thallium)

(Acetic acid)

ILYUSHCHENKO, V.M.; AABOTIN, P.I.; KOZLOVSKIY, M.T.; PORUBAYEV, V.P.

Oxidation potentials of lead and thallium amalgams in alkaline
solutions. Trudy Inst.khim.nauk AN Kazakh.SSR 6:54-60 '60.
(MIRA 14'4)

(Amalgams)

(Electromotive force)

NIGMETOVA, R.Sh.; KOZLOVSKIY, M.T.

Interaction between tetravalent and divalent germanium, and zinc
amalgam. Trudy Inst.khim.nauk AN Kazakh.SSR 6:144-151 '60.

(MIRA 14:4)

(Germanium) (Zinc) (Cementation (Metallurgy))

KOZLOVSKIY, M.T.; BUKHMAN, S.P.; NOSEK, M.V.

Effect of copper ions on the reduction of arsenic by zinc amalgam.
Trudy Inst.khim.nauk AN Kazakh.SSR 6:115-122 '60. (MIRA 14:4)
(Arsenic) (Copper) (Zinc)

BUKHMEN, S.P.; NOSEK, M.V.; KOZLOVSKIY, M.T.

Reduction of arsenic by zinc amalgam in the presence of iron and
antimony ions. Trudy Inst.khim.nauk AN Kazakh.SSR 6:123-130 '60.

(MIRA 14:4)

(Arsenic)

(Zinc)

NOSEK, M.V.; BUKHMAN, S.P.; KOZLOVSKIY, M.T.

Effect of temperature on the reduction of arsenic by zinc amalgam.
Trudy Inst.khim.nauk AN Kazakh.SSR 6:131-137 '60. (MIRA 14'4)
(Arsenic) (Zinc)

85636

S/075/60/015/005/007/026/XX
B002/B056

26.1620

AUTHORS: Speranskaya, Ye. F. and Kozlovskiy, M. T.

TITLE: The Reducing Properties of Mercury ✓

PERIODICAL: Zhurnal analiticheskoy khimii, 1960, Vol. 15, No. 5,
pp. 534 - 540

TEXT: When investigating electrochemical processes in mercury or amalgam electrodes, the reducing effect of mercury is mostly neglected. This may lead to errors in the case of polarographic work. The present paper therefore investigates the reducing effect of metallic mercury in various media upon the following ions: Copper (II), iron (III), selenite, tellurite, permanganate, bichromate, molybdate, iodate, vanadate, persulfate, and arsenate. A corresponding solution together with metallic Hg was shaken in a separating funnel or in a special vessel of 50 ml capacity for 15-20 minutes, mercury was separated, and a possibly existing precipitate was, in addition, filtered off and investigated (Tables 2 and 3). The following additions were added to the solutions (Table 2): NH_4Cl , $\text{NH}_4\text{Cl} + \text{NH}_4\text{OH}$, $(\text{NH}_4)_2\text{SO}_4$, KSCN, KJ, NaOH.

Card 1/2

85636

The Reducing Properties of Mercury

S/075/60/015/005/007/026/XX
B002/B056

The reaction in 1-6 N HCl and H_2SO_4 was investigated (Table 3). The reduction potential of mercury was determined in each case. It was found that in alkaline, neutral and acid media permanganate and persulfate are reduced, iron (III) and molybdate only in non-acidified and acid media. Selenite, tellurite, vanadate, iodate, chromate, and copper (II) are reduced only in acid solutions. Considerable influence is exerted on the reduction not only by acidity but also by the presence of other anions which shift the anode oxidation potential of mercury. The potential of mercury in the process of reduction depends on the nature of the depolarizer and of the reduced ion. An investigation of the cementation of copper and tellurium (Table 4) by cadmium amalgam showed that, together with cadmium, also mercury participates in the reaction. There are 4 tables and 25 references: 8 Soviet, 8 US, 5 British, 2 German, 1 Czechoslovakian, and 1 French.

ASSOCIATION: Kazakhskiy gosudarstvennyy universitet im. S. M. Kirova,
Alma-Ata (Kazakh State University imeni S. M. Kirov,
Alma-Ata)

SUBMITTED: July 8, 1959

Card 2/2

ZEBREVA, A. I.; KOZLOVSKI^V, M. T.

Solubility of antimony in mercury. Coll Cz Chem 25 no.12:3188-3194
D '60. (EEAI 10:9)

1. Akademiya nauk Kazakhskoy SSR i Kazakhskiy gos. universitet,
Alma-Ata, SSSR.

(Antimony) (Mercury)

ILYUSHCHENKO, V.M.; KOZLOVSKIY, M.T.

Cementation of copper-cadmium solutions with zinc amalgam.

Izv.AN Kazakh. SSR. Ser.khim. no.1:47-51 '61. (MIRA 16:7)

(Intermetallic compounds) (Cementation (Metallurgy))

KOZLOVSKIY, M.T.

On the problem of hydrogen overvoltage. Vest. AN Kazakh. SSR
17 no.12:81-82 D '61. (MIRA 15:3)

1. Chlen-korrespondent AN KazSSR.
(Hydrogen)
(Electrolysis)

S/081/62/000/017/029/102
B162/B101

AUTHORS: Nigmatova, R. Sh., Kozlovskiy, M. T.

TITLE: The reduction of germanium by zinc amalgam in the presence of copper

PERIODICAL: Referativnyy zhurnal. Khimiya, no. 17, 1962, 98, abstract 17V78 (Izv. AN KazSSR. Ser. khim., no. 2(20), 1962, 38-41 [summary in Kaz.])

TEXT: In the reduction of Ge by Zn amalgam the presence of Cu ions in the solution has a great influence on the relation between the different products of reduction: increasing greatly the quantity of Ge, which is changing into amalgam, and lowering the quantity of suspended elementary Ge. Similar effect has the presence of Cu in amalgam when Ge is reduced on the Hg cathode. The reason of such an effect of Cu is its reaction with Ge under the formation of intermetallic compounds. [Abstracter's note: Complete translation.]

✓

Card 1/1

BUKHMEN, S.P.; NOSEK, M.V.; KOZLOVSKIY, M.T.

Effect on indium ions on the reduction of arsenic by zinc
amalgam. Trudy Inst. khim. nauk AN Kazakh. SSR 9:122-130
'62. (MIRA 16:6)

(Arsenic) (Amalgams)
(Indium compounds)

NOSEK, M.V.; BUKHMAN, S.P.; KOZLOVSKIY, M.T.

Reduction of a mixture of tri- and pentavalent arsenic by
zinc amalgam. Trudy Inst. khim. nauk AN Kazakh. SSR 9:131-134
'62. (MIRA 16:6)

(Arsenic) (Reduction, Chemical)
(Amalgams)

S/850/62/009/000/010/012
B117/B186

AUTHORS: Kozlovskiy, M. T., Nigmatova, R. Sh.
TITLE: Germanium reduction in the presence of nickel and cobalt ions
SOURCE: Akademiya nauk Kazakhskoy SSR. Institut khimicheskikh nauk.
Trudy. v. 9. Alma-Ata, 1962. Elektrokimiya rastvorov i
metallicheskikh sistem, 151-156

TEXT: The effect of nickel and cobalt on the behavior of germanium during its cementation with zinc amalgam was studied by a method described previously (Izv. AN KazSSR, ser. khim., 2(20) 38 (1962)). It was shown that the smallest amounts of nickel in the solution are sufficient to transfer germanium, except for a very small portion, into the amalgam. The potential of zinc amalgam remains practically unchanged. When the concentration of Ni in the solution is increased, germanium is reduced slowly but completely, nickel being cemented first of all. Simultaneously, the potential of zinc amalgam is slightly shifted toward positive values. The electrolysis of germanium salt with a mercury cathode in the presence of nickel ions, as well as on nickel amalgam, showed that nickel ions in

Card 1/2

Germanium reduction in the ...

S/850/62/009/000/010/012
B117/B186

the solution, not metallic nickel atoms are responsible for the transfer of germanium into the amalgam. No satisfactory explanation of the effect of nickel ions on the germanium reduction could be given. The cementation of germanium with saturated zinc amalgam in the presence of cobalt showed that here again the germanium is reduced down to the elementary state, forming amalgam. Cobalt ions affect the process similarly to nickel ions, the only difference being that germanium and cobalt are cemented more slowly when larger amounts of cobalt are used. There are 1 figure and 8 tables.

Card 2/2

MIRKIN, V.A.; KOZLOVSKIY, M.T.

Electrochemical behavior of tetra- and pentavalent vanadium
on a platinum microelectrode. Zhur.anal.khim. 17 no.6:704-710
S '62. (MIRA 16:1)

1. Institut khimicheskikh nauk AN KazSSR, Alma-Ata.
(Vanadium—Electric properties)
(Electrodes, Dropping mercury)

MIRKIN, V.A.; KOZLOVSKIY, M.T.

Region of the existence of vanadyl vanadates in relation to
the pH of the medium. Zhur. neorg. khim. 8 no.6:1538-1539
Je '63. (MIRA 16:6)

1. Institut khimicheskikh nauk AN KazSSR.
(Vanadium compounds—Absorption spectra)
(Hydrogen-ion concentration)

GLADYSHEV, V.P.; KOZLOVSKIY, M.T.

Reduction of selenite ion and tellurite ion by zinc amalgam. Izv.
vys.ucheb.zav.;khim.i khim.tekh. 6 no.5:724-728 '63. (MIRA 16:12)

1. Kazakhskiy gosudarstvennyy universitet, kafedra analiticheskoy
khimii.

KOZLOVSKIY, M.T., akademik

Amalgam metallurgy. IUn. tekhn. 7 no.8:27-32 Ag '63.
(MIRA 16:10)

1. Akademiya nauk Kazakhskoy SSR.

DRAGAVTSEVA, N.A.; USENOVA, Z.M.; YERDENBAYEVA, M.I.; KOZLOVSKIY, M.T.

Interaction of elementary selenium, selenides, and selenites of certain metals with sodium amalgam. Zhur.anal.khim. 18 no.6:773-776 Je '63. (MIRA 16:9)

1. Institute of Chemical Sciences, Academy of Sciences, Kazakh S.S.R., Alma-Ata.

(Selenium compounds) (Amalgams)

L 11111-63

EWP(q)/EWT(m)/BDS AFFTC/ASD JD

8/032/63/029/005/005/022

54

AUTHOR: Omarova, K.D. and Kozlovskiy, M.T.

TITLE: Coulometric determination of thallium²¹ at a controlled potential

PERIODICAL: Zavodskaya Laboratoriya, v. 29, no. 5, 1963, 528-530

TEXT: A method of coulometric determination of thallium is described, based on the Lingane method, and the possibility of using the MacNevin and Baker method with a mercury electrode is shown. The relative error in determination of 0.2 - 2.0 mg Tl is 0.48 - 11.5%. There are 3 figures and 1 table. The most important English-language references are: (1) J.J. Lingane, J. Am. Chem. Soc., 67, 1916 (1945) and (2) W.M. MacNevin and V.B. Baker, Anal. Chem., 24, 986 (1952).

ASSOCIATION: Kazakhskiy politekhnicheskiy institut i Kazakhskiy gosudarstvennyy universitet im. S. M. Kirova (Kazakh Polytechnic Institute and Kazakh State University imeni S. M. Kirov)

ja/CL

Card 1/1

MIRNIN, V.A.; KOZLOVSKIY, M.T., akademik

· Study of the composition and properties of vanadyl
vanadates by spectrophotometry. Dokl. AN SSSR 150 no.2:
317-320 My '63. (MIRA 16:5)

1. Institut khimicheskikh nauk AN KazSSR (for Kozlovskiy).
(Vanadates) (Spectrophotometry)

SPERANSKAYA, Ye.F.; KOZLOVICH, N.T.

Polarographic reduction of hexavalent molybdenum in fluoride-
containing acid solutions. Zav.lab. 30 no.4:403-406 '64.
(MIRA 17:4)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova.

MIRKIN, V.A.; KOZLOVSKIY, M.T.

Relation between the shape of pentavalent vanadium polarograms and the structure of its ions in aqueous solutions as dependent on pH. Izv.vys.ucheb.zav.; khim. i khim. tekhn. 6 no.6:901-908 '63.
(MIRA 17:4)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova, kafedra analiticheskoy khimii.

KOZLOVSKIY, M.T.; GRUSHINA, N.V.

Chronometric method for the determination of bismuth. Zhur.
anal. khim. 18 no.5:585-587 My'63. (MIRA 17:2)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova, Alma-Ata.

SAGNPIYVA, K.ZE.; KOSLOVSKIY, M.T.

Amalgam polarography of manganese. Vest. AN Kazakh. SSR. 19
no.5:85-87 My '63. (MIRA 17:7)

L 23081-65 EWT(a)/EWP(t)/EWP(x) IJP(c) JD

ACCESSION NR: AP4049824

8/0360/64/000/002/0003/0009

AUTHOR: Kozlovskiy, M. T.; Gladyshev, V. P.; Gaynrikha, K. Ya.; Tamber, G. A.

TITLE: Preparation of high purity bismuth in an electrolyzer with bipolar amalgam electrodes

SOURCE: AN KazSR Izvestiya Seriya khimicheskikh nauk, no. 2, 1964, 3-9

TOPIC TAGS: bismuth refining; electrolytic bismuth, electrolytic refining, amalgam electrode

ABSTRACT: The nuclear and semiconductor industries require bismuth with a purity of 99.9999%. Conventional refining methods by zonal melting combined with electrochemistry are extremely laborious. The authors therefore describe an effective method of refining [as claimed in their author's certificate No. 161 321 (1962)] by electrolysis using bipolar amalgam electrodes. The electrolyzer (see Fig. 1 of the Enclosure) is made of plastic and consists of 5 compartments, of which the first contains the anode (5 x 5 cm plate of crude bismuth in a vinylidene chloride fabric bag to retain sludge); while the second, third and fourth compartments serve for electrolytic separation of Bi from impurities during its transit through the bipolar amalgam electrodes. In the fifth compartment, bismuth is transferred from the amalgam anode to the electrolyte and simultaneously

Card 1/3

L 23081-65

ACCESSION NR: AP4049824

deposited as metallic bismuth on a solid cathode of spectroscopically pure graphite with an area of 40 cm². Perchlorate (compartments 1, 2, 5) and alkali tartrate (compartments 3 and 4) solutions are used as electrolytes in which bismuth forms complex ions and is not subject to hydrolysis. During the first stage, amalgams and electrolytes are saturated with Bi with the aid of a small additional Pt electrode consecutively immersed in each compartment. After that, a continuous operation at 100 ma/cm² current density begins. Refined Bi is melted off the cathode every 20 hrs. and vacuum remelted for the elimination of Hg residues (10⁻⁴%) and degassing. Bi purity reaches 99.9997% with 3x10⁻⁴% impurities divided among 24 components. Orig. art. has: 1 figure and 3 tables.

ASSOCIATION: None

SUBMITTED: 00

ENCL: 10

SUB CODE: MM, CC

NO REF SOV: 018

OTHER: 003

Card 2/8

L 23081-65

ACCESSION NR: AP4049824

ENCLOSURE: 61

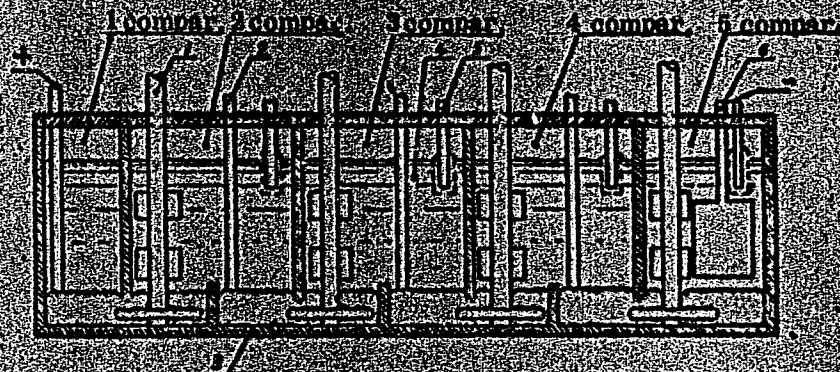


Figure 1.

Schematic diagram of the electrolyzer: 1 - mixer, 2 - graphite lead rod, 3 - amalgam, 4 - electrolyte, 5 - additional cathode, 6 - cathode for pure metal deposition

Card 3/3

DRAGAVTSEVA, N.A.; KOZLOVSKIY, M.T.

Reduction of trivalent antimony by cadmium amalgam in sulfuric
and hydrochloric acid solutions. Trudy Inst. khim. nauk AN
Kazakh.SSR 12:131-136 '64. (MIRA 18:2)

BRIKUN, I.K.; KOZLOVSKIY, M.T.

Interaction of hydroxylamine with arsenic, antimony, and
bismuth compounds. Zhur. anal. khim. 19 no.2:212-215 '64.
(MIRA 17:9)

1. Kazakhskiy gosudarstvennyy universitet imeni Kirova, Alma-Ata.

KOZLOVSKIY, M.T., akademik; OMAROVA, K.D.; LEVITSKAYA, S.A.

Amalgam polarography with stationary dropping mercury electrodes as a variant of coulometric analysis. Vest. AN Kazakh. SSR 20 no.2:81-84 F '64. (MIRA 18:1)

1. AN Kazakhskoy SSR (for Kozlovskiy).

KOZLOVSKIY, M.T.; DRAGAVTSEVA, N.A.

Indium cementation by cadmium amalgam in solutions of
hydrochloric acid and sodium chloride. Zhur. prikl. Khim.
37 no.9:2055-2058 S '64. (MIRA 17:10)

L 23490-65 BT(w)/BT(t)/BT(b) JRF(s) JD

ACCESSION NR: AP5002189

S/0080/64/037/012/2606/2611

AUTHOR: Gladyshev, V. P., Tember, G. A., Geyrikhs, K. Ya.;
Kozlovskiy, M. T.

TITLE: Electrolysis in tartrate-alkali electrolytes Communication II in a series
of works on the separation of bismuth from lead and certain other metals by the
amalgam method

SOURCE: Zhurnal prikladnoy khimii, v. 37, no. 12, 1964, 2606-2611

TOPIC TAGS: electrolysis, bismuth amalgam electrolysis, tartrate alkali elec-
trolyte, bismuth separation

ABSTRACT: The electrochemical behavior of bismuth amalgam in tartrate-alkali
electrolytes and the separation of bismuth from other metals by anodic oxidation
of their mixed amalgams in these electrolytes were studied. Examination on
effects of compositions and electrolyte component concentrations showed that the
best electrolyte for precipitating bismuth upon anodic oxidation of its amalgam
comprised 5M KOH + 1M KNaC₄H₄O₆. The maximum anodic current was increas-

Card 1/2

L 23490-65

ACCESSION NR: AP6002169

ed approximately two times by increasing the electrolysis temperature from 20 to 80C. The anodic oxidation of amalgams of a series of metals in the tartrate-al-kali electrolyte was studied; the oxidation potential of the amalgams of most metals differs sufficiently from that of the bismuth amalgam to permit their separation. Thallium and copper could not be separated; antimony was separable only at low current densities; but lead, tin, cadmium, zinc, gallium, indium and iron were almost completely separated. Orig. art. has: 3 tables and 6 figures

ASSOCIATION: Kazakhskiy gosudarstvennyy universitet (Kazakhak State Univer-sity)

SUBMITTED: 04Mar62

ENCL: 00

SUB CODE: GC

NR REF SOV: 006

OTHER: 001

Card 2/2

L 41348-65 EPA(S)E2/ETTC(T)/ETPC(E)/ETPC(E)/ETTC(E) Pt-10 LIP(G) ID/JS 3/3/77
 ACCESSION NR: AP5000496 S/0078/64/009/012/2734/2737

AUTHOR: Dragaviseva, N. A.; Bukhar, S. P.; Muratova, Ye. E.; Kozlovsky, M. T.

TITLE: The formation of arsenic amalgam

SOURCE: Zhurnal neorganicheskoy khimii, v. 9, no. 12, 1964, 2734-2736/

TOPIC TAGS: arsenic amalgam; cadmium amalgam; electrolytic reduction; amalgam; arsenic solubility; mercury

ABSTRACT: While arsenic is almost insoluble in mercury, it was observed to pass into the mercury upon reducing tin amalgam in sulfuric acid solution. This occurred without the formation of intermetallic compounds. It will form an amalgam only at low sulfuric acid concentrations. Experimental reduction of trivalent arsenic by cadmium amalgam (2 at. %) in sulfuric acid solution showed its reduction to arsine and elemental arsenic which was partly suspended, partly amalgamated. The elemental form was converted to the trihydride upon continuing the reaction. Increasing arsenic content and decreasing acid concentration increased

Card 1/2

L 41348-65

ACCESSION NR: AP5000486

the arsenic amalgamation. The cadmium content was also found to influence this amalgamation, particularly the reaction rate and the distribution of elemental As between suspension and amalgam. In the absence of an excess of the metal-reducing agent and under maximally unfavorable conditions for hydrogen formation it was possible to obtain an As amalgam practically free of cadmium. Reduction from a concentrated solution (10 g/liter) yielded an almost quantitative amalgamation of e.g. 500 mg arsenic with 10 ml mercury. Electrolytic reduction at low current intensity (20-100 mA/cm²) in 1N sulfuric acid solution continued for several days in the absence of hydrogen atoms on the electrode surface also gave good results. No suspension of elemental As and arsine were detected under these conditions. This electrolytically obtained amalgam is also a 2-phase system but differs from the one obtained through cementation by its lesser volume, and the As collects mainly in the upper layer which can easily be removed. Orig. art. has: 1 table and 2 figures.

ASSOCIATION: Institut Khimicheskikh Nauk AN KazSSR (Institute of Chemical Sciences, AN KazSSR)

SUBMITTED: 24 Aug 63

ENCL: 00

SUB CODE: GC

NR REF SOV: 007

OTHER: 005

Ord 2/2

KRASNOVA, I.Yel.; ZFEREVA, A.I.; KOLCHOVSKIY, M.T., akademik

Determination of the solubility and diffusion coefficient of nickel in mercury by the method of anodic polarography with storage. Dokl. AN SSSR 186 no. 2:115-117 By 164. (1978 17:7)

1. Akademiya AN Kazakhskoy SSR (for Kholodovskiy).

ZEBREVA, A.I.; KOZLOVSKIY, M.T.

Effect of the formation of intermetallic compounds in the amalgam
methods for the determination of metals. Zav. lab. 30 no.10:1193-
1195 '64. (MIRA 18:4)

1. Kazakhskiy gosudarstvennyy universitet imeni Al-Farabi.

KOZLOVSKIY, M.T.; GLADYSHEV, V.P.; GAYNRIKHS, K. Ya.; TEMBER, G.A.

Separation of bismuth from lead and some other metals by the
amalgam method in perchloric acid electrolytes. Zhur. prikl.
khim. 37 no.11:2402-2407 N '64 (MIRA 18:1)

Kazakhskiy gosudarstvennyy universitet.

DRAGAVTSEVA, N.A.; BUKHMAN, S.P.; KOZLOVSKIY, M.T.

Reduction of arsenic by cadmium amalgam in sulfuric and hydrochloric acid solutions. Trudy Inst. khim. nauk AN Kazakh.SSR 12: 114-130 '64.
(MIRA 18:2)

DRAGAVTSEVA, N.A.; KCZLOVSKIY, M.T.

Reduction of a trivalent antimony by a cadmium amalgam in
tartrate-ammonia solutions. Izv. AN Kazakh. SSR. Ser. khim.
nauk 14 no.1:9-14 Ja-Mr '64. (MIRA 18:3)

GLADYSHEV, V.P.; TEMBER, G.A.; GEYRIKHS, K.Ya.; KOZLOVSKIY, M.T.

Electrolysis in tartrate-alkali electrolytes. *Zhur. prikl. khim.*
37 no.12:2606-2611 D '64. (RUSS 19:3)

1. Kazakhskiy gosudarstvennyy universitet.

KOZLOVSKIY, M.T.

Electrochemical methods of concentration. Trudy Kom. anal. khim. 15:132-140 '65.
(MIRA 18:7)

KOZLOVSKIY, M.T.; DRAGAVTSEVA, N.A.; BUKHEIAN, S.P.

Effect of certain metals on the reduction of trivalent arsenic with
cadmium amalgam. Izv. AN Kazakh.SSR.Ser.khim.nauk 15 no.2:3-7 Ap-
Je '65. (MIRA 18:9)

BEIKUN, I.K.; KOLLEVOVSKIY, M.T.

Study of the interaction of bi and trivalent vanadium with hydro-
xylamine by potentiometric titration. Izv. AN Kazakh. SSR. Ser.
khim. nauk 15 no.2:8-14 Ap-Je '65. (NTRA 18:9)

SAGADIYEVA, K.Zh.; KOZLOVERIY, M.T.

Amalgam polarography of indium. Izv. AN Kazakh. SSR. Ser. Khim.
nauk 15 no.13-6 Ja-Mr'65. (MIRA 18:12)

BUKHMEN, S.P.; DRAGAVTSEVA, N.A.; KOZLOVSKIY, M.T.

Reduction of trivalent arsenic by amalgams of a series of
metals. Izv. AN Kazakh. SSR. Ser. khim. nauk 15 no.1:9-12
Ja-Mr '65. (MIRA 18:12)

1. Submitted Nov. 2, 1964.

DRAGAVTSEVA, N.A.; BUKHMAN, S.P.; MURATOVA, Ye.B.; KOZLOVSKIY, M.T.

Formation of arsenic amalgam. Zhur. neorg. khim. 9 no.12:2734-
2737 D '64. (MIRA 18:2)

1. Institut khimicheskikh nauk AN KazSSR.

ROZIDARSKIY, Nikolai Timoforevich; KUCHENKO, Viktor Aleksandrovich;
GOLITSIN, I.I., red.

[Large diesel engines; their design and operation] Dizel'-nye dvigateli iakh; konstruktssia i obsluzhivanie.
Moskva, Transport, 1964. 132 p. (MIRA 47:11)

KOZLOVSKIY, N.

Cotton Growing

Tractor for the cultivation of cotton Khlopkovodstvo No. 2, 1952.

Monthly List of Russian Accessions, Library of Congress, June 1952. UNCLASSIFIED.

1. KOZLOVSKIY, N.
2. USSR (600)
4. Excavating Machinery
7. Ditching machine model D-267 for the construction of distributing canals.
Khlopkovodstvo No. 8, 1952.

9. Monthly List of Russian Accessions, Library of Congress, January 1953, Unclassified.

KOZLOVSKIY, Nikolay Fedorovich [Kozlovs'kyi, M.F.]; STADNICHENKO, G.S.
[Stadnychenko. H.S.], red.; KONTAR, K.F., tekhn. red.

[Japan seen through the lens; news photographer's notes] V ob'-
iektyvi Iaponiia; zapysky fotokorespondenta. Kyiv, Derzh.vyd-
vo obrazotvorchoho mystetstva i muzychnoi lit-ry URSR, 1962. 69 p.
(MIRA 16:2)

(Japan--Views)

IVANOV, A. E.; KOZLOVSKIY, N. G.

Agriculture

Manual for the State-Farm Director, Moskva, Gos. izd-vo sel'khoz. lit-ry. Vol. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, October 1952. UNCLASSIFIED.

IVANOV, A.Ye.; KOZLOVSKIY, N.G.; KAL'CHENKO, S.V., redaktor; MART'YANOV, F.M., redaktor; PEROV, S.V., redaktor; PYLAYEVA, A.P., redaktor; TRESHCHENKO, N.I., redaktor; OVCHINNIKOVA, A.N., redaktor; RAKETINA, Ye.D., redaktor; VALLOD, A.I., tekhnicheskij redaktor; VNSKOVA, Ye.I., tekhnicheskij redaktor

[Handbook for directors of state farms] Spravochnaia kniga direktora sovkhoza. Izd. 3-e, perer. Moskva, Gos. izd-vo sel'khoz. lit-ry. Pt.1.1956. 952 p. Pt.2.1956. 1016 p. (MLR 10:3)
(State farms)

OZHIGANOV, V.S.; LEVANTO, M.A.; KOROLEVA, V.A.; Primali uchastiye:
KOZLOVSKIY, N.I.; ABOIMOV, P.S.; STARTSEVA, G.B.; KRIVONOSOVA, R.B.;
-SHERSTYUK, M.I.; KONOVALOVA, T.S.; ZHABOTINSKIY, I.M.; RADIN, F.A.

Improving the technology of producing electrical steel. Stal'
22 no.4:343-346 Ap '62. (MIRA 15:5)

1. Verkh-Isetskiy metallurgicheskiy zavod.
(Steel—Electric properties)

ZAKHARCHENKO, A.L., inzh.; MARAKHTANOV, K.P., inzh.; GORBUNOV, V.R., inzh.;
ZHIVCHIKOV, N.I., inzh.; KOZLOVSKIY, N.I., inzh.; BARSUKOV, A.F.,
red.; PRCHENKIN, I.V., tekhn.red.

[New tractors and agricultural machinery; results of testing in
1957] Novye traktory i sel'skokhoziaistvennye mashiny; resul'taty
ispytaniy 1957 goda. Moskva, No.2. 1959. 331 p.

(MIRA 13:12)

1. Russia (1923- U.S.S.R.) Glavnoye upravleniye mekhanizatsii i
elektrifikatsii sel'skogo khozyaystva.

(Tractors--Testing)

(Agricultural machinery--Testing)

BOGDASHIN, A.S.; BOGORODSKIY, A.A.; VINGARIT, M.B.; GORBUNOV, V.I.;
GORBUNOV, V.R.; DUROV, V.K.; YERMAKOV, A.L.; IVANOV, A.A.;
KARAKOVA, N.I.; KOBLYAKOV, L.M.; KOZLOVSKIY, N.I.; MARAKHTANOV,
K.P.; MIRUMYAN, G.N.; NECHETOV, G.P.; NOVIKOV, A.G.; OL'KHOVSKIY,
K.I.; PESTNYAKOV, A.I.; POLAPANOV, A.V.; SKLYAREVSKAYA, Ye.Kh.;
SOLDATENKOV, S.I.; SOROKIN, Ye.M.; TRUSHINA, Z.V.; FEDOROV, P.F.;
FEDOSEYEV, A.M.; FROG, N.P.; SHAMAYEV, G.P.; YANOVSKIY, V.Ya.;
OREKHOV, A.D., spetsred.; DEYEVA, V.M., tekhn.red.

[Handbook on new agricultural machinery] Spravochnik po novoi
tekhnike v sel'skom khoziaistve. Moskva, Gos.izd-vo sel'khoz.
lit-ry, 1959. 364 p. (MIRA 13:2)
(Agricultural machinery)

COUNTRY : USSR
 COUNTRY : Cultivated Plants. Commercial. Oleiferous.
 Sugar-Bearing. 11
 A.C. JOUR. : Roshol., No. 1, 1952, No. 1748
 AUTHOR : Kozlovskiy, N.I.
 INST. :
 TITLE : Cultivation of Sugar Beet in Italy.
 ORIG. PUB. : Sakharnaya svetla, 1952, No. 4, 11-12
 ABSTRACT : In the year 1956, 250,000 hectares of sugar beet were grown in Italy. According to the sowing area, Italy at the present time occupies the fifth place, and according to the productivity, the seventh place in Europe. During the years 1948-1952, on the average 173 centners/hectare were harvested. The sugar content of the beets, on the average, comprised 14.5-16%. The greater portion of sugar beet areas are found in northern and central Italy. Success at growing is secured with the use of appropriate seeds. Obtained are seeds of productive, saccharine, and frost-resistant.

INFO: 1/2

1. TITLE :
2. SUBJECT :

3. SOURCE : RABBIT, No. 1, 1959, No. 178

4. SUMMARY : sugary lines. Methods of sowing, treatment of the soil,
handling and harvesting of the crop are given out.
-- J. K. Gaidarov

5. PAGE : 2/2

MEL'NIK, Viktor Danilovich; BOVSUNOVSKIY, Anton Ivanovich; KOZLOVSKIY, N.I., nauchnyy red.; CHIRKOV, A.Ya., red.; PERZDERIY, S.P., tekhn. red.

[New technology for growing sugar beets] Novaia tekhnologiya
vozdel'yvaniya sakharnoi svekly. Moskva, Proftekhizdat, 1962.
61 p. (MIRA 16:1)

1. Mekhanizator kolkhoza "Bol'shevik" Zhashkovskogo rayona
Cherkasskoy oblasti (for Mel'nik).
(Zhashkov District--Sugar beets)

KOZLOVSKIY, N.S.

Replacing copper valves with iron ones. Sakh. prom. 32 no.8:57-59
Ag '58. (MIRA 11:9)

1. Gaysinskiy sakharney zavod.
(Sugar industry--Equipment and supplies)

KOZLOVSKIY, Nikolay Sergeyevich, st. prepod.; SOSUNOV, G.I.,
docs., kand. tekhn. nauk, red.

[Fundamentals of the design of mechanical drives; manual
on the course "Machine parts."] Osnovy proektirovaniia
mekhanicheskikh privodov; uchebnoe posobie po kursu
"Detali mashin." Moskva, Mosk. gornyi in-t, 1961. 50 p.
(MIRA 17:8)